2: What are Claimed:

Support a small number of wireless devices by a storage server

1: The method of using storage of a server system as external storage of the wireless devices including following steps:

a) Partition the storage of a server system into multiple volumes, let each of them with suitable size, and establish a corresponding file system on top of it.

b) Export each storage volumes (file system) of a server system to a specific wireless device.

c) The user of wireless device could manage assigned external storage volume (file system) on a server and its data stored there.

d) The user could store the data of wireless device into the assigned external storage volume (file system) on server system.

e) The user of wireless device could download data directly from remote web-site into its assigned external storage (file system) on a server without goes through the wireless device itself.

f) The user of wireless device could retrieve and play multimedia data stored on external storage volume (file system) through web-browser of the wireless device.

2: The claim 1, wherein, step a) further includes

a) With supporting of console support software of the server, the server admin staff can perform partitioning the storage of the server from web-console on console host.

b) The server admin staff may also partition the storage of the server from the native user console on the server.

3: The claim 2, wherein, step a) further includes

a) The console support software of the server must send storage information of the server to the web-console of console host. This including the storage device name, storage total size etc.

b) The administration staff on console host can use web-console to fill and to send the storage partition information to the console support software of the server. The storage partition information includes the number of the partitions (volumes) and the size of each partition (volume).

c) Upon receiving storage partition information from web-console of console host, the console support software of the server performs the actual storage partition, which divides entire storage into multiple small volumes.

d) For each small storage volumes, a corresponding file system could be built on top of it.

4: The claim 1, wherein, step b) further includes

a) The console support software of the server must make association between each storage volumes (file system) of the server and each specific wireless devices in such way that permitting each storage volume be exclusively accessible to a web-browser of a specific wireless device.

5: The claim 1, wherein, step c) further includes
   a) With the support of console support software modules of the server system, the user from web-browser of wireless device can setup the folder/directory structure on his/her assigned external storage volume (file system), which located on the server.
   b) With the support of console support software modules of the server system, the user from web-browser of wireless device can perform all data management operations such as delete, copy, move, rename etc. on his/her assigned external storage volume (file system), which located on the server.

6: The claim 5, wherein, step a) and b) further include
   a) The console support software modules of the server system must communicate with web-browser of wireless device in such way that the user from web-browser of wireless device can choose desired data management operations and send information of desired operation to console support software modules of the server system. These operation include creating, deleting folders/directories, copying, moving, or reaming data file etc.
   b) Upon receiving the data management operation, the console support software modules of the server system actually performs these operations on a specific storage volume (file system) of the server system.

7: The claim 1, wherein, step d) further includes
   a) To store the data such as digital photo pictures, or messages from wireless device into the assigned external storage (file system) on a server, the other software modules of wireless device need to send these data to other service modules of the server via communication link between them.
   b) Upon receiving data, the other service modules of the server write these data to the assigned storage volume (file system) of the server.

8: The claim 1, wherein, step e) further includes
   If the wireless device user want to download data from remote web server into its assigned external storage on server, the following steps are required:
   a) The user from web-browser of a specific wireless device accesses a remote download web site and obtains the information for download via path between them. The information of downloading includes the data file name to be downloaded, the IP address of that download web site etc.
   b) The other software modules of a specific wireless device obtain download information, which becomes available in the cached web pages on wireless device after the web-browser accessing the download site.
   c) The other software modules of a specific wireless device send the obtained download information to other service modules of external storage server via path between them.
   d) Upon receiving the download information from a given specific wireless device, the other service modules of the external storage server send a web download request to download web-site via path between them based on download information obtained and then receives the download data from download web-

site. The HTTP protocol can be used for sending and receiving such information between other service modules of the external storage server and the web server of the remote download web-site.

e) Upon receiving downloaded data, the other service modules of the external storage server write these data into assigned storage volume (file system) for that given specific wireless device.

9: The claim 1, wherein, step f) further includes

a) The user from web-browser of wireless device can browse the files/folders stored in its assigned external storage volume (file system) on a server system.

b) If a web-browser capable to invoke the embedded video or audio functionality, the user from web-browser of wireless device can play the video or audio multimedia data, which stored on wireless' external storage volume (file system) located on a server.

Support external storage for larger number of wireless devices

10: To support huge number of wireless devices, the CCDSVM infrastructure can be deployed, with which a larger number of storage servers can be organized to provide external storage for wireless devices while each storage server can support a fix number of wireless device to its capacity limits.